

## CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA

## Abstract of the Disclosure

The present invention provides methods for synthesis and therapeutic  
5 use of DNA and RNA oligonucleotides and analogs. RNA oligonucleotides are  
synthesized using a small, circular DNA template which lacks an RNA polymerase  
promoter sequence. The RNA synthesis is performed by combining a circular  
single-stranded oligonucleotide template with an effective RNA polymerase and at  
least two types of ribonucleotide triphosphate to form an RNA oligonucleotide  
10 multimer comprising multiple copies of the desired RNA oligonucleotide sequence.  
Preferably, the RNA oligonucleotide multimer is cleaved to produce RNA  
oligonucleotides having well-defined ends. Preferred RNA oligonucleotide  
multimers contain ribozymes capable of both *cis* (autolytic) and *trans* cleavage.

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